



ENTERED OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/903,508A
DATE: 07/10/2002
TIME: 13:19:41
Input Set : A:\1533_0830003 sub seqlist.ST25.txt
Output Set: N:\CRF3\07102002\I903508A.raw

3 <110> APPLICANT: Abbas, Charles
4 Voronovsky, Andrii
5 Kshanovska, Barbara
6 Fayura, Liubov
7 Sibirna, Kateryna
8 Sibirny, Andrii
9 Dmytruk, Kostiantyn
11 <120> TITLE OF INVENTION: Transformation Systems for Flavinogenic Yeast
13 <130> FILE REFERENCE: 1533.0830003
15 <140> CURRENT APPLICATION NUMBER: US 09/903,508A
C--> 16 <141> CURRENT FILING DATE: 2002-06-26
18 <150> PRIOR APPLICATION NUMBER: US 60/218,244
19 <151> PRIOR FILING DATE: 2000-07-14
21 <150> PRIOR APPLICATION NUMBER: US 60/288,491
22 <151> PRIOR FILING DATE: 2001-05-04
24 <150> PRIOR APPLICATION NUMBER: US 60/290,667
25 <151> PRIOR FILING DATE: 2001-05-15
27 <160> NUMBER OF SEQ ID NOS: 3
29 <170> SOFTWARE: PatentIn version 3.1
31 <210> SEQ ID NO: 1
32 <211> LENGTH: 1493
33 <212> TYPE: DNA
34 <213> ORGANISM: Candida famata
37 <220> FEATURE:
38 <221> NAME/KEY: misc_feature
39 <222> LOCATION: (576)..(576)
40 <223> OTHER INFORMATION: May be any nucleotide
43 <220> FEATURE:
44 <221> NAME/KEY: misc_feature
45 <222> LOCATION: (626)..(626)
46 <223> OTHER INFORMATION: May be any nucleotide
49 <220> FEATURE:
50 <221> NAME/KEY: misc_feature
51 <222> LOCATION: (966)..(966)
52 <223> OTHER INFORMATION: May be any nucleotide
55 <220> FEATURE:
56 <221> NAME/KEY: misc_feature
57 <222> LOCATION: (1000)..(1000)
58 <223> OTHER INFORMATION: May be any nucleotide
61 <220> FEATURE:
62 <221> NAME/KEY: misc_feature
63 <222> LOCATION: (1084)..(1084)
64 <223> OTHER INFORMATION: May be any nucleotide

RAW SEQUENCE LISTING

DATE: 07/10/2002

PATENT APPLICATION: US/09/903,508A

TIME: 13:19:41

Input Set : A:\1533_0830003 sub seqlist.ST25.txt

Output Set: N:\CRF3\07102002\I903508A.raw

67 <220> FEATURE:
68 <221> NAME/KEY: misc_feature
69 <222> LOCATION: (1149)..(1149)
70 <223> OTHER INFORMATION: May be any nucleotide
73 <220> FEATURE:
74 <221> NAME/KEY: misc_feature
75 <222> LOCATION: (1174)..(1174)
76 <223> OTHER INFORMATION: May be any nucleotide
79 <220> FEATURE:
80 <221> NAME/KEY: misc_feature
81 <222> LOCATION: (1197)..(1197)
82 <223> OTHER INFORMATION: May be any nucleotide
85 <220> FEATURE:
86 <221> NAME/KEY: misc_feature
87 <222> LOCATION: (1223)..(1223)
88 <223> OTHER INFORMATION: May be any nucleotide
91 <220> FEATURE:
92 <221> NAME/KEY: misc_feature
93 <222> LOCATION: (1226)..(1226)
94 <223> OTHER INFORMATION: May be any nucleotide
97 <220> FEATURE:
98 <221> NAME/KEY: misc_feature
99 <222> LOCATION: (1251)..(1251)
100 <223> OTHER INFORMATION: May be any nucleotide
103 <220> FEATURE:
104 <221> NAME/KEY: misc_feature
105 <222> LOCATION: (1268)..(1268)
106 <223> OTHER INFORMATION: May be any nucleotide
109 <220> FEATURE:
110 <221> NAME/KEY: misc_feature
111 <222> LOCATION: (1280)..(1280)
112 <223> OTHER INFORMATION: May be any nucleotide
115 <220> FEATURE:
116 <221> NAME/KEY: misc_feature
117 <222> LOCATION: (1318)..(1318)
118 <223> OTHER INFORMATION: May be any nucleotide
121 <220> FEATURE:
122 <221> NAME/KEY: misc_feature
123 <222> LOCATION: (1347)..(1347)
124 <223> OTHER INFORMATION: May be any nucleotide
127 <220> FEATURE:
128 <221> NAME/KEY: misc_feature
129 <222> LOCATION: (1375)..(1375)
130 <223> OTHER INFORMATION: May be any nucleotide
133 <220> FEATURE:
134 <221> NAME/KEY: misc_feature
135 <222> LOCATION: (1379)..(1379)
136 <223> OTHER INFORMATION: May be any nucleotide
139 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 07/10/2002

PATENT APPLICATION: US/09/903,508A

TIME: 13:19:41

Input Set : A:\1533_0830003 sub seqlist.ST25.txt

Output Set: N:\CRF3\07102002\I903508A.raw

140 <221> NAME/KEY: misc_feature
141 <222> LOCATION: (1382)..(1382)
142 <223> OTHER INFORMATION: May be any nucleotide
145 <220> FEATURE:
146 <221> NAME/KEY: misc_feature
147 <222> LOCATION: (1385)..(1385)
148 <223> OTHER INFORMATION: May be any nucleotide
151 <220> FEATURE:
152 <221> NAME/KEY: misc_feature
153 <222> LOCATION: (1391)..(1391)
154 <223> OTHER INFORMATION: May be any nucleotide
157 <220> FEATURE:
158 <221> NAME/KEY: misc_feature
159 <222> LOCATION: (1410)..(1410)
160 <223> OTHER INFORMATION: May be any nucleotide
163 <220> FEATURE:
164 <221> NAME/KEY: misc_feature
165 <222> LOCATION: (1424)..(1424)
166 <223> OTHER INFORMATION: May be any nucleotide
169 <220> FEATURE:
170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: (1428)..(1428)
172 <223> OTHER INFORMATION: May be any nucleotide
175 <220> FEATURE:
176 <221> NAME/KEY: misc_feature
177 <222> LOCATION: (1435)..(1435)
178 <223> OTHER INFORMATION: May be any nucleotide
181 <220> FEATURE:
182 <221> NAME/KEY: misc_feature
183 <222> LOCATION: (1437)..(1437)
184 <223> OTHER INFORMATION: May be any nucleotide
187 <220> FEATURE:
188 <221> NAME/KEY: misc_feature
189 <222> LOCATION: (1447)..(1447)
190 <223> OTHER INFORMATION: May be any nucleotide
193 <220> FEATURE:
194 <221> NAME/KEY: misc_feature
195 <222> LOCATION: (1457)..(1457)
196 <223> OTHER INFORMATION: May be any nucleotide
199 <220> FEATURE:
200 <221> NAME/KEY: misc_feature
201 <222> LOCATION: (1459)..(1459)
202 <223> OTHER INFORMATION: May be any nucleotide
205 <220> FEATURE:
206 <221> NAME/KEY: misc_feature
207 <222> LOCATION: (1472)..(1472)
208 <223> OTHER INFORMATION: May be any nucleotide
211 <220> FEATURE:
212 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING

DATE: 07/10/2002

PATENT APPLICATION: US/09/903,508A

TIME: 13:19:41

Input Set : A:\1533_0830003 sub seqlist.ST25.txt

Output Set: N:\CRF3\07102002\I903508A.raw

```
213 <222> LOCATION: (1484)..(1484)
214 <223> OTHER INFORMATION: May be any nucleotide
217 <400> SEQUENCE: 1
218 cttgactgat tacgaattcg agctcggtag ccggggatca tgaatgctag tctttttaca      60
220 ctgaatattt ttttaacgat tttttaataa ttttgcaatc atttaagaaa aaccacaaat      120
222 ggttttccaa aatttaaatt gatttttttag aaagtcctaa aaaatagaat cataccaaat      180
224 aaagaacaac ttaaagtcac tatgacaaat tcagaaatac aatcgtatga tccgttcattg      240
226 gataaagctg caaagtcaca agcaaggcta actaagatcc tctaggggga tctctagag      300
228 tcgactacgt cgttaaggcc gtttctgaca gagtaaaatt cttgagggaa ctttcaccat      360
230 tatgggaaat ggttcaagaa ggtattgact taaactccat caaatggtca ggtcattgag      420
232 tgttttttat ttgttgattt tttttttttt tagagaaaat cctccaatat ataaattagg      480
234 aatcatagtt tcatgatttt tagagaaaat cctccaatat ataaattagg aatcatagtt      540
W--> 236 tcatgatttt ctgttacacc taactttttg tgtgnggcc tcttccttgt caatattaat      600
W--> 238 ctgttacacc taactttttg tgtgnggcc tcttccttgt caatattaat gttaaagtgc      660
240 aattcttttt cttatcacg ttgagccatt agtatcaatt gttaaagtgc aattcttttt      720
242 cttatcacg ttgagccatt agtatcaatt tgcttacctg tattccttta catcctcctt      780
244 tttctccttc ttgataaatg tgcttacctg tattccttta catcctcctt tttctccttc      840
246 ttgataaatg tatgtagatt gcgtatatag tttcgtctac cctatgaaca tattccattt      900
248 tatgtagatt gcgtatatag tttcgtctac cctatgaaca tattccattt tgtaatttcg      960
W--> 250 tgtcgnnttc attatgaatt tcatttataa aggttatgtn tgtaatttcg ggcgtttcta      1020
252 ttatgaattt catttataaa gtttatgtcc aatatcataa aaaaagagaa tctttttaag      1080
W--> 254 caanggattt ctttaactcaa atatcataaa aaaagagaat ctttttaagc aagggtttt      1140
W--> 256 ctttaactnt tcgggggacgc atccccgctt cgngggactg gtggaccctt aaatcctntc      1200
W--> 258 ggcgacagca tcccgaacttc gngngnactg tggaaccctt aaatcccagt ntgatcctgc      1260
W--> 260 ttccaaaact tttactggtn ttcatggggc taccaccagt ctgaacctgc atccaaaact      1320
W--> 262 tttactgctc ttcaagggct taccttntca ggcagggtcaa tgacaattca catcntgcnc      1380
W--> 264 anacnaaaaa nggcttttca gcagggtcaan gcaatttcac atcntgcnc aaaaananagt      1440
W--> 266 ggcgatnggg tgacctntnt ttggcaacga tngggtgacc tatntttgca aac          1493
269 <210> SEQ ID NO: 2
270 <211> LENGTH: 414
271 <212> TYPE: DNA
272 <213> ORGANISM: Pichia guilliermondii
274 <400> SEQUENCE: 2
275 tatgcacatt cgcacgccga ggtgcagcgt ttaggcgcgg ctcaacggaa gccaacggcc      60
277 gccacaaatt gtccggaaag tcgccgaaac tgatccactg gtaccacagc ccataagaa      120
279 ccccctttta tattaaaaac cgttcttcag ccacttttga tcacattgtt tgcagccgcc      180
281 cgttgctgcc atccaaacac cagcgcgtcc ccgcaccctt ttacggtgcc cactgcattg      240
283 gaatttgcat aaaacagcct caggaagtgg attaatTTTT agagcactca agtcatcatg      300
285 ctgcaatctc tgcattcatg aatgactccc gttgatacag ggaactcaga ccgcaagcgg      360
287 cgaagagtca caagagcgtg tgatgtgtgt cgactctaga ggatccccgg gtac          414
290 <210> SEQ ID NO: 3
291 <211> LENGTH: 487
292 <212> TYPE: DNA
293 <213> ORGANISM: Candida famata
295 <220> FEATURE:
296 <221> NAME/KEY: misc_feature
297 <222> LOCATION: (415)..(415)
298 <223> OTHER INFORMATION: May be any nucleotide
301 <400> SEQUENCE: 3
```

RAW SEQUENCE LISTING

DATE: 07/10/2002

PATENT APPLICATION: US/09/903,508A

TIME: 13:19:41

Input Set : A:\1533_0830003 sub seqlist.ST25.txt

Output Set: N:\CRF3\07102002\I903508A.raw

```
302 tgattacgaa ttcgagctcg gtacccgggg atcatgaatg ctagtctttt tacactgaat 60
304 attttttttaa cgatttttta ataattttgc aatcatttaa gaaaaaccac aaatggtttt 120
306 ccaaaattta aattgatttt ttagaaagtc ctaaaaaata gaatcatacc aaataaagaa 180
308 caacttaaag tcactatgac aaattcagaa atacaatcgt atgatccgtt catggataaa 240
310 gctgcaaagt cacaagcaag gctaactaag atcctctaga gtcgactacg tcgttaaggc 300
312 cgtttctgac agagtaaaat tcttgagga actttcacca ttatgggaaa tggttcaaga 360
W--> 314 aggtattgac ttaaactcca tcaaatgggc aggtcattga gtgtttttta tttgntgtat 420
316 tttttttttt ttagagaaaa tcctccaata tataaattag gaatcatagt ttcatgattt 480
318 tctgtta 487
```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/903,508A

DATE: 07/10/2002
TIME: 13:19:42

Input Set : A:\1533_0830003 sub seqlist.ST25.txt
Output Set: N:\CRF3\07102002\I903508A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 576,626,966,1000,1084,1149,1174,1197,1223,1226,1251,1268
Seq#:1; N Pos. 1280,1318,1347,1375,1379,1382,1385,1391,1410,1424,1428,1435
Seq#:1; N Pos. 1437,1447,1457,1459,1472,1484
Seq#:3; N Pos. 415

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/903,508A

DATE: 07/10/2002

TIME: 13:19:42

Input Set : A:\1533_0830003 sub seqlist.ST25.txt

Output Set: N:\CRF3\07102002\I903508A.raw

L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:236 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:540
 L:238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:600
 L:250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:960
 L:254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1080
 L:256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1140
 L:258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1200
 L:260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1260
 L:262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1320
 L:264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1380
 L:266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1440
 L:314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:360